

REMARKS**§ 112 Rejections**

Claims 32-33 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards (or Applicants regard) as the invention.

Claim 33 has been cancelled.

Claim 32 has been amended to recite “wherein the mixing device forces the coated particles and optical elements through at least one shear field”.

This amendment is supported at p. 9, lines 1-2. One of ordinary skill in the art appreciates that “shear” is a condition caused by forces that tend to produce an opposite but parallel motion.

§ 103 Rejections

Claims 1-9, 13-14, 21-24, 26-30, 32-33 are rejected under 35 USC § 103(a) as being unpatentable over Palmquist et al. (‘196) in view of Richart et al.

Claims 10 and 12 are rejected under 35 USC § 103(a) as being unpatentable over Palmquist et al. (‘196) in view of Richart et al. as applied to claims above, and further in view of Ajax LynFlow Continuous mixer Reference (LynFlow reference).

Claim 11 is rejected under 35 USC § 103(a) as being unpatentable over Palmquist et al. (‘196) in view of Richart et al. as applied to claims above and further in view of Eirich et al.

Claims 15-17 are rejected under 35 USC § 103(a) as being unpatentable over Palmquist et al. (‘196) in view of Richart et al. as applied to claims above, and further in view of Lange (‘469).

Claims 18-20 are rejected under 35 USC § 103(a) as being unpatentable over Palmquist et al. (‘196) in view of Richart et al. as applied to claims above and further in view of Schleifstein.

Claim 33 is rejected under 35 USC § 103(a) as being unpatentable over Palmquist et al. (‘196) in view of Richart et al. as applied to claims above, and further in view of Bates.

All the independent claims (i.e. 1, 22, 26, and 30) are rejected under 35 USC § 103(a) as being unpatentable over Palmquist et al. ('196) in view of Richart et al.

The Examiner acknowledges that Palmquist et al. does not disclose a continuous process or mechanically mixing the coated particles with optical elements by means of at least one rotating mixing member such that optical elements are embedded in the unsolidified polymeric composition.

The Examiner stated that “Richart et al. discloses a continuous process for coating particles including use of a rotating member further being a disc (see col 3, lines 33-39; col 5, lines 28-40) . . .” The Examiner alleged that it would be obvious to use the coating process of Richart et al. because “a continuous process is more efficient than a batch process”.

The Applicant submits that Richart et al. fails to teach or suggest a “continuous” process. Hence, there is no reason to combine these references based on the motivation proposed by the Examiner.

Independent claims 1 and 22 have been amended to include the features of dependent claim 23 as defined at p. 4, lines 11-16 and p. 7, lines 23-24.

Independent claim 1 recites,
“A method of making retroreflective elements comprising:
providing a plurality of core particles;
coating the particles with an unsolidified crosslinkable polymeric composition forming coated particles;
mechanically mixing the coated particles with optical elements in a continuous process by means of at least one rotating mixing member such that optical elements are embedded in the unsolidified crosslinkable polymeric composition; and
solidifying the crosslinkable polymeric composition by curing forming retroreflective elements.

Independent claim 22 has also been amended to recite “an unsolidified crosslinkable polymeric composition” and “solidifying the crosslinkable polymeric composition by curing forming retroreflective elements”.

The Applicant submits that Richart et al. teaches (abstract) “A flake-containing coating powder is obtained by admixing a coating powder that based upon a thermosetting resin and metallic or non-metallic flake. The powder and flake are mixed at a temperature in the range of above the softening temperature of the thermosetting resin of the coating powder but below the melting temperature of the thermosetting resin and with sufficient mechanical shear to prevent agglomeration of the coating powder particulates. Mixing is for a time sufficient to embed at least about 75% by weight of the flake into the coating powder.”

Col 4, lines 7-17 of Richart et al. states that, “The particular resins are selected with softening temperatures sufficiently high to prevent the individual coating powder particulates from sintering or fusing during transportation and storage. The softening temperatures are generally in the range of 30° - 70°C., most typically in the 35°C.- 60°C. range. **Furthermore, the resin should have a melting temperature sufficiently low that it can be melt-compounded at a temperature well below a temperature where reaction between the resin and the cross-linking agent and/or cure catalyst results in substantial curing of the resin.**”

The Applicant submits that Richart et al. teaches away from curing the coated particles, as recited in independent claims 1 and 22, and dependent claims thereof, are not obvious over the combination of Palmquist et al. and Richart et al. If the coated particles of Richart et al. were cured, the coated particles would no longer be suitable for use as a powder coating. Since Richart et al. clearly teaches away from curing the coated particles, the combination of Palmquist et al. and Richart et al. does not arrive at the claimed invention of independent claims 1 and 22, and dependent claims thereof.

Independent claims 26 and 30 have been amended to include the features of dependent claim 29. Accordingly, these claims and dependent claims thereof, recite inorganic core particle. Hence, independent claims 26, 30, and dependent claims thereof recite three components, i.e.

inorganic core particles, a coating (i.e. the unsolidified polymeric composition), and optical element particles.

In contrast, the method described in Richart et al. employs only two components, i.e. the powder and the flake. Therefore, the combination of Richart et al. with Palmquist et al. would simply result in coated particles, but not coated core particles having secondary particles embedded in the unsolidified polymeric (coating) composition.

Since the combination of Palmquist et al. and Richart et al. fails to teach or suggest combining coated particles with second particles, such as optical elements, such that the second particles are embedded in the unsolidified polymeric composition, the combination of Palmquist et al. and Richart et al. does not arrive at the claimed invention of independent claims 26, 30 and dependent claims thereof.

Reconsideration and a timely allowance are respectfully requested.

Respectfully submitted,

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